

# SOUTH AFRICAN ARCHITECTURAL RECORD

---

THE JOURNAL OF THE CAPE, NATAL, ORANGE FREE STATE AND  
TRANSVAAL PROVINCIAL INSTITUTES OF SOUTH AFRICAN ARCHITECTS  
AND THE CHAPTER OF SOUTH AFRICAN QUANTITY SURVEYORS.

PHONE 34-2921                      VOLUME TWENTY NINE                      NUMBER TEN  
611, KELVIN HOUSE, 75, MARSHALL STREET, JOHANNESBURG.

JOINT EDITORS: PROFESSOR G. E. PEARSE, W. D. HOWIE

---

## CONTENTS FOR OCTOBER 1944

IMPACT OF MEMPHIS—AN IMPRESSION, by Bernard Cooke,  
A.R.I.B.A., M.I.A.                      .....                      243

LEPTIS MAGNA—A ROMAN COLONY IN AFRICA, by E. W.  
N. Mallows, M.A., A.R.I.B.A., M.I.A.                      .....                      246

SCHOOL OF ARCHITECTURE AND QUANTITY SURVEYING,  
UNIVERSITY OF PRETORIA—FIRST ANNUAL EXHIBITION  
OF STUDENTS' WORK                      .....                      260

TRANSVAAL PROVINCIAL INSTITUTE—A Commentary on the  
Work of the Provincial Committee, by John Fassler, B.Arch.,  
M.I.A.                      .....                      268

---

The Editors will be glad to consider any MSS., photographs or sketches submitted to them, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury they cannot hold themselves responsible for MSS., photographs or sketches, and publication in the Journal can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. The Institute does not hold itself responsible for the opinions expressed by contributors. Annual subscription £1 is direct from the Secretary.



STATUE, PROBABLY OF NEPTUNE, HOLDING A TRIDENT IN THE LEFT HAND.

*Lepita Magazine*

# IMPACT OF MEMPHIS — AN IMPRESSION

By BERNARD COOKE, A. R. I. B. A.

We crossed the Nile in a felucca; we might have stepped into the Bible. It was a different world, a great stride through aeons of space and time. The types were unreal: a jovial face at the tiller, copper bronzed and smiling below the enormous bush of his moustache—a Biblical Laughing Cavalier; and by him a wizened one with a sour Semitic face talked and gesticulated, airing a grievance. The two sat together, bushy copper faced and yellow stubbly-sneering. We slipped through the swirling mud flooded river, and the sails of other feluccas were dark brush strokes on the amber grey monochrome of palms and buildings on the bank. A small anchor lay on the deck, a sack of millet, and an empty bird cage on the grey age-worn timber of the deck. The water sparkled like diamonds in the early sun. It was an old worn slipper of a boat with a seagull's wing for a sail. We sat, foolish anachronisms, with our clumsy boots and cameras, and tried to believe it was real.

Soon we walked through El Badreshein, trailing a retinue of dragomen and donkeys led by boys pestering us like sticky flies. They could not believe we wanted to walk, and followed up, hoping we would tire. Every hundred yards they reduced the hire fee for donkeys by a few piastres till it was a pittance, then gave up in desperation. We walked on stolidly till a new relay of dragomen, donkeys, boys, caught up and did the same, pleading high pitched. Soon we were free of the village where children had stopped bathing in the canal to call "Saida," where a woman poured coffee from a copper urn and a camel strode past, palm frond laden—superciliously.

Now we were in a date palm grove—fecund and hanging gold, serene and rich.

Till suddenly: there was Rameses, lying on his back in the sun.

At first we thought he was a felled palm, till we felt the bulk of his great stone red body and his mighty arms, and the palm shadow on his conceited face.

GRANITE SCULPTURE OF RAMESES II.





I had thought to find a certain deadness in some Egyptian sculpture, but this is alive, not physically—realistically, but aesthetically—dynamically. The great arms do not hang at his side; they force themselves downwards like huge pistons, the biceps smooth cylinders coaxed out of stone, the fists rounded cubes, and the whole a monolith, undisturbed.

Here was the true sculptural form distilled and abstracted from the natural form; grasping the essentials, firm, architectonic and of rock quality, yet retaining all the exquisite subtleties of the natural form and with the subtle modulation of its planes cut with the polished precision of the machine.

How they loved the great serene form, how zealously they guarded it. It was the same with the second and larger forty-two feet long figure in alabaster; the first was thirty-two feet in granite. The clothes, girdle and sword are merely etched on the surface; the form remains, unfretted, not frittered away. No matter that the sword thus curves to follow the thigh and the skirt melts into the flesh. Always the primary fundamental form remains, never undercut or worried away.

It seemed right that they had carved it so, like a great monolith standing in the desert, polished smooth and rounded by the wind-blown sand.

At first it was wrong seeming that the sculpture lay in the palm grove and not in the desert bare; but Egypt was the Nile as much as the desert or more.

Then there was the Sphinx, alabaster whitely feminine and graceful—a gentle note and human, with a young girl's face, ingenuous and simple, but the same pure form with the hair drawn back and knotted on the neck, symmetrical like the bowl of a guitar.

We rumbled on to Sakkara, in tanks this time—surrealist—into the desert sharply. There the Mastaba became for me a living thing, not some dead, dark hole in the ground. Down a few steps below the desert sand and we were there. There were the same primary unadulterated forms; but volumes this time, space forms, not mass forms.

The rooms were rectangular, narrow and tall, clean cut and unrounded—pure—sheer smooth ashlar, wall to wall and floor to ceiling, uninterrupted and bold. But on these smooth simple walls—what richness: they were carved all over every inch of them. But, as before, etched only with great restraint in low relief less than an eighth of an inch deep.

In these mastabas of Ty, Ptah-hotep and Aket-hotep one sees pictured the whole life that surrounded them, or rather that they hoped would surround them after death. Strips of pictures a foot or so high, miles of them, line above line—continuous—a documentary film, yes, they are like a film, for some are instantaneous.

Here you see men catching fish, standing erect in line, net rope in hand; then snap—next shot—all on their backs, rope pulled tight—fish in the net secure. Or the butcher busy on the ox, slice and off comes a leg and pass it on. But the pattern—the design—that is where they are fine—superb. Always the strong rhythm beats through, linking each to each and leading on.



GRANITE SCULPTURE OF RAMESES II.



THE ALABASTER SPHINX.





BAS RELIEF SCULPTURE IN THE MASTABA OF TY.

Repetition, over and over everywhere; repetition with subtle variation, like music. There would be geese, exquisitely drawn: heads all erect in a line, gracefully; then one with head down; then four more erect again; then one head awry and four erect again; then one curved back: so on in rich rhythm.

The Egyptians seem to have loved repetition, perhaps because it was inherent in their lives and their gods: the rising and setting of the sun; the ebb and flow of the Nile; the pulse of life and death; the sun, the Nile and death: gigantic rhythms.

There were many exquisite things in the tombs: Nile boats with riggings complete—splendid patterns; a lovely panel of oxen being driven through a river with the beautiful pattern of their interlocking horns. Then there was a delicate work of maidens carrying baskets of fruit on their heads; the

elegant arms and hands raised to support the loads, delineated with the grace and delicacy of an early Florentine, with colour reminiscent of them too—black and gold.

A great deal of colour still remained—yellow ochre, Indian red and a little cerulian blue. Some parts were unfinished—just blocked out, with the drawing still on the stone; even the red squaring-up lines made by the flick of the cord. We could detect the work of the different artists, some with more sensibility than others.

But whatever was done had its underlying structure; lines leading through; the punt poles of barges controlling the seeming chaos of many human figures; or the simpler expedient of repetition. Everywhere the main theme remains: the wall undisturbed. So it seemed in this visit to Memphis and Sakkara: that they kept this intact.

It was always the fundamental form.

BAS RELIEF SCULPTURE IN THE MASTABA OF PTAH-HOTEP.



Photographs by Paul Friede.

This article was written by Mr. Bernard Cooke whilst in Egypt on Active Service.  
—Editor.



# LEPTIS MAGNA

## A ROMAN COLONY IN AFRICA

By E. W. N. MALLOWS, A.R.I.B.A., M.I.A.

### 1. BACKGROUND

The southern shores of the Mediterranean have always held a considerable degree of mystery for the European, and for 1,200 years they remained almost a forgotten land. They were the northern edge of a vast land mass whose southern and western limits had never been defined, whose products were so strange as to seem to come from another world, and which was almost completely sealed off from European curiosity by the deserts of the Sahara.

The coast itself for most of its length was inhospitable. Only in the west, in the hill country of modern Algiers and Tunis, was there anything approaching naturally fertile land or good harbours; while in the east, with the sole exception of the Cyrenaican "bulge," was a waterless plateau, ending some miles inland from the coast in a rocky escarpment. The coastal fringe, in the whole length from Tunis to Egypt, had only one fertile portion besides the Cyrenaican hills: the short and narrow strip of Tripolitania, stretching to-day from Mareth to Misurata, and which was the classical land of the three cities, Sabratha, Oea (the modern Tripoli) and Leptis Magna. The inland plateau in Tripolitania becomes more arid and stony as one travels south till the Fezzan is reached, that north-central portion of the Sahara where scattered oases and the date-palm have always supported a sparse semi-nomadic population. To the south of the Fezzan lie the east-west central ridge of the Sahara, the Tibesti highlands and beyond them, finally, Equatorial Africa.

\* \* \*

Progressive desiccation has been at work both north and south of the Sahara for many centuries, but it has been probably worse in the north. It was a problem, no doubt, in both Carthaginian and Roman times, but not on the scale that it exists to-day. Annual rainfall now is approximately 16 inches on the coast, decreasing southwards to nil in the Fezzan, but it is strictly seasonal, between November and April, and forms only sudden torrents in otherwise dry water-courses (wadis), so that in all Tripolitania there is no permanent river. The water supply to-day—limited to the coast and isolated points inland—comes solely from wells, though there are heavy dews in May and June, which cover the land with desert flowers and a thin, wiry grass. Average temperature

on the coast varies from 53° F. in winter to 79° F. in summer; but when the Qibli, the hot wind from the south, blows, everything is burnt up and shade temperature can rise to over 120° F. If the wind is strong, the dust and sand of the desert come with it, so that all along the coast dunes of blown sand are formed, which, without artificial aid, the local grasses are powerless to control. "In the lands of sand," one traveller has said, "you can easily realise why green is the sacred colour of Islam."

The original stock of this barren land was Berber, mostly short, swarthy, long-headed, "Hamitic" in ethnic phraseology, and related to the rest of the Mediterranean stock that covered its shores before classical times. They later suffered the fate of this stock all over Europe in being driven further and further to the west, so that to-day their speech survives chiefly in Morocco and some of the Western Mediterranean islands. Yet they have survived at least three thousand years of alien culture—Phoenician, Roman, Byzantine and Arab—and they are still the basic stratum of all North African stock, though with many successive strains superimposed.

In Roman times Gallus described them as "Velox, patiens laborum," and commented on their inability to combine, their continual tendency to dissolve into numerous sects. They gave to North Africa its great classical characteristic, its individuality, its rebellious dislike of authority or uniformity, so that it became, as Broderick says, "the land of the great heresies," the home of St. Cyprian, Augustine, Arius and Donatus. Berber society has always been and still is essentially democratic, with a small independent self-governing village as its basic unit, and so it came into ever-increasing conflict with the rigid despotism of the later Roman Empire. It was the Berbers who formed the great mass of the working peasantry on which all their conquerors, but most particularly Rome, built up their over-weighted economic pyramid. It was this, by its exploitation and injustice, that was the main cause of the disintegration of the later Roman Empire, directly it was subjected to external pressure.

It was as the terminus of the trans-Saharan trade routes, which brought up slaves and gold and ivory from the south,

and as shipping centres for this trade with the rest of the Mediterranean, that Tripolitania first grew. It is the natural geographic head to the easternmost of the trans-Saharan routes, the nearest point on the Mediterranean coast to the series of oases which form natural stepping-stones from Lake Chad through Tibesti and Fezzan to the north. How old was this trade with Central Africa through the Fezzan is not known, but the sea empire of Tyre and Sidon was founding colonies to develop it along the North African coast before 1,000 B.C. The name Tripolitania may refer to the three cities, but also may refer to the triple division of most Phoenician colonies, caused by the three parent cities of Tyre, Sidon and Ciradus, each having a separate section in each colony. The three cities of Sabretha, Oea and Leptis Magna, were all older than Carthage, which only became the capital of the Phoenician Empire when the parent cities were conquered by Persia. It was the Phoenician Empire, based on these southern shores of the Mediterranean, that dominated the whole sea, traded with Portugal and Britain, East Africa and India, and even completed the first known circumnavigation of the African continent.

## 2. THE PHOENICIAN CITY

Four successive towns occupied the site of Leptis Magna—the Phoenician, the early Roman, the late Roman and the Byzantine. There was no break between the second and the third, nor probably between the first and the second; but the Vandal conquest separated the third from the fourth, and the fourth was the last. The site was completely deserted after the Arab conquest, and the sands then took final possession.

Of the Phoenician town, nothing except the name is certain. This was LBQY or LPQY, Latinised as Lepcis, and later Leptis, Magna being added to distinguish it from another Leptis near Carthage; it is not known whether the original name is Phoenician or Berber. The site of the town is uncertain, though there is a strong probability it was on the northern promontory which shields the natural harbour at the mouth of the wadi. There the natural scouring action of the river floods would form the deepest water, and the rocky outcrop, protected on three sides by water and with only a narrow neck connecting it to the mainland, would give the best natural protection. On this site certainly the Romans later started their first town.

The known history of the town is equally barren. Some conflict occurred with a Greek attempt to found a rival settlement nearby in the sixth century, but this was smashed with the help of Carthage, and the boundary between the Greek and Punic worlds fixed at Arae Philaenorum, the modern Marble Arch, still to-day the boundary between Tripolitania and Cyrenaica. Later, during the second or third Punic wars, it was apparently involved with the fifth-column activities of Rome against the Carthaginian Empire. Both Masinissa

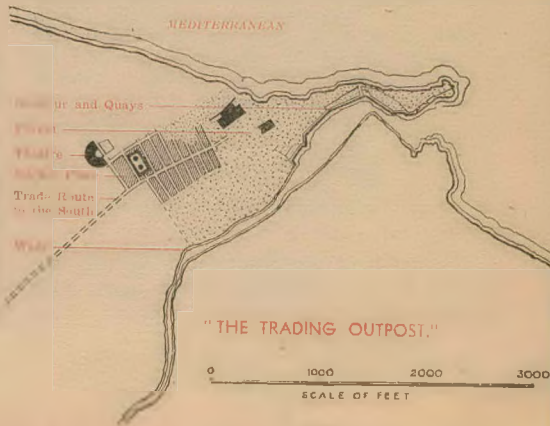
and his grandson Jugurtha (whom Rome used as allies against Carthage) controlled much of Tripolitania, if not the coast itself; and though Carthage was destroyed in 146 B.C., Tripolitania was not taken over till the execution of Jugurtha in 104 B.C., and the Roman province of Africa only extended to the Cyrenaican border in 46 B.C. In 107 B.C. the town requested from Metellus, then campaigning against Jugurtha, a Roman garrison, and four cohorts of Ligurians were sent. The town subsequently became a "federated city," and later the privileges of "libertas" and "immunitas" were granted, the latter giving immunity from all taxes levied by Rome. All this tends to make probable a peaceful transition from Punic to Roman rule, and consequently a continuity of life from the Punic to the Roman town.

The degree of civilisation seems to have been high. Rostovtzeff says, "The African coast in Phoenician times was a vast and beautiful garden," with olives, fruit, garden produce, and some wine, as the chief products. It was a Carthaginian, Mago, who wrote a standard agricultural treatise of the pre-Roman era, probably Greek knowledge of the third or fourth century B.C. applied to African conditions. His theme was scientific and capitalist agriculture, but with garden produce and not corn as the main theme. Livy states that Leptis Magna (meaning probably the whole district) paid a tax of one talent per day to Carthage, which argues a high degree of prosperity. To gain control of this prosperity was one of the chief motives for the Roman attack.

## 3. THE EARLY ROMAN CITY

### "THE TRADING OUTPOST."

By 46 B.C., when Roman Africa reached the Cyrenaican border, Leptis Magna must have been under full Roman control and a garrison station controlling the coast road. In 19 B.C. Cornelius Balbus finally defeated the Garamantes, and so brought the Fezzan, and with it the trade route to the south, under Rome: the stone marking the southern limits of the empire in the Fezzan still stands. The theatre at Loptis was finished in 8 B.C., and in Tiberius' reign (who died



in 37 A.D.) a triumphal arch was built across the main road from the south. The city was therefore fully Romanised by the Augustan age. Another arch to Trajan (died 117 A.D.) was built only slightly to the south of the one to Tiberius, and if, as seems probable, these arches (together with later ones) mark the southern entrance to the city of their time, little growth occurred for the next century.

The heart of the city was the old Forum, built on the high ground where the rocky promontory, which protects the harbour on the north, joins the mainland: very probably, in fact, on the site of the Punic town. From the Forum, on the south-west, led directly the track to the desert and the south; and on this track, as on a spine down which came the life-blood of the settlement, the city developed. Streets were formed at regular intervals at right angles on either side of this spine, and further south, near the arches of Tiberius and Trajan, the market place and the theatre were placed, the latter as usual, no doubt, just outside the city's limits. Remains of early baths exist between the old Forum and the sea, but the main baths, which were started under Hadrian and enlarged by Septimius Severus, are further to the south in the later town. The harbour, to start with, must have been on the south side of the promontory, directly below the old Forum, and so at the natural end of the trade route from the south.

\* \* \*

The actual buildings of any architectural interest that have survived from this period are two: the Market Place and the Theatre. What buildings are visible at the moment in the old Forum are either Christian, which, though African Christianity started in the second century, can hardly be older than the third century, or temples not sufficiently excavated or with sufficient remains to be fully intelligible.

The Market Place (1) was an open rectangle, approximately a double square in plan, surrounded by a colonnade on its perimeter and with two octagonal structures, presumably produce stalls, in the centre. Within the perimeter colonnade were set other smaller stalls of carved marble (2), some pierced with holes of different diameter for testing the standard measures. The central octagons were planned with a circular arcaded portion in the centre—apparently the stalls for produce—surrounded by an octagonal colonnade to shelter the customers. Each octagon was raised on a podium of three steps above the general pavement level: the perimeter colonnade was raised one step only. The roofing is uncertain: the height of the perimeter colonnade was approximately 20 feet and the octagons about the same: the octagons were constructed of dressed limestone, while the columns of the perimeter colonnade were of monolithic granite.



1. THE MARKET PLACE LOOKING NORTH TO THE MEDITERRANEAN.
2. A DETAIL OF A MARBLE STALL IN THE MARKET PLACE.
3. A GENERAL VIEW SHOWING THE SEATS OF THE THEATRE.



The Theatre (3) is to-day practically complete except for its scaena, the stone building behind the stage which acted as a permanent backcloth. It is of the standard Roman plan, with the auditorium a semi-circle, the orchestra reserved for senators, and a wide and deep stage raised above the orchestra level and enclosed at both back and sides with the scaena. The seating is practically complete, with over 30 tiers for its full circumference; of the scaena, little except the first five or ten feet of the walls remain, though some columns of the first tier survive, and others were being re-assembled when the war started. It has the standard three openings in the back and one each side, the centre one in the back being approached through an exceptionally large apse. A further opening each side, in addition to the stage ones, apparently gave private access to the senators' seats in the orchestra.

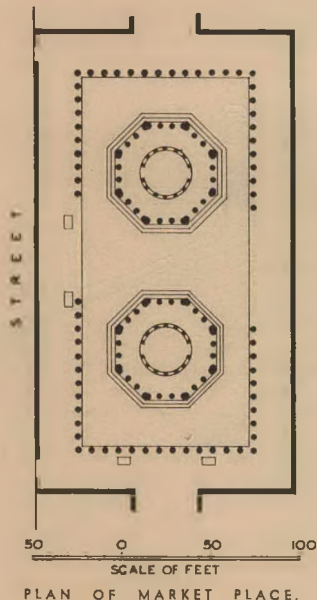
Sabratha, one of the sister cities of Tripolitania, has another typical Roman theatre, but with the scaena almost complete, with three tiers of columns to a height of 40 to 50 feet still in position; a queer survival since there is little else of the town, which was quite as extensive as Leptis, left above ground level. Both these theatres were used by ENSA for their shows to the troops towards the end of the North African campaign, and in both cases the acoustics were found to be so good that no loudspeakers were used. This is surprising in the case of Leptis, as the absence of the scaena



4. THE COLONNADED COURT, CONTAINING A TEMPLE, WHICH WAS BUILT AGAINST THE BACK OF THE SCAENA OF THE THEATRE.

meant the absence of any good reflector; but it is interesting that at Leptis ENSA performed not on the Roman stage but in the Roman orchestra and on a temporary wooden stage. This would give in the absence of a reflector, undoubtedly better results, and also some degree of resonance.

Immediately behind the theatre, and apparently designed in conjunction with it, against the back of the scaena, was built an open court, trapezoid in plan. Vitruvius says: "Behind the scenes porticos are to be built, to which, in case of sudden showers, the people may retreat from the theatre, and also sufficiently capacious for the rehearsals of the chorus. . . ." [Bk.V : Ch.I.] This had an open colonnade on the perimeter and in the centre a temple said to be in honour of the Imperial family. Only the plan of the temple remains, but most of the columns of the colonnade (4) still stand, with Corinthian white marble capitals and monolithic granite shafts.



#### 4. THE LATE ROMAN CITY

##### "THE IMPERIAL CITY."

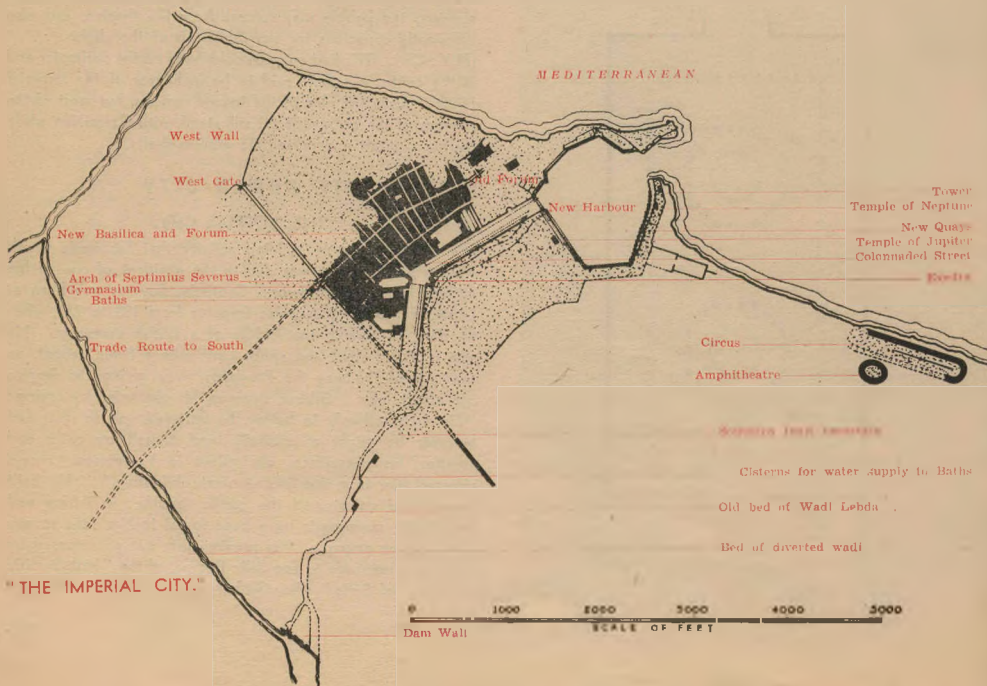
The great burst of building activity that has made Leptis Magna so distinctive was due to the accident of one of her citizens becoming Emperor. Septimius Severus was born at Leptis in 146 A.D., and was Emperor from 193 to 211, when he died at York in the middle of a British campaign. He was of Punic stock and spoke Latin with a Punic accent, an example of the way the Provinces were giving the Empire her ablest men. Gibbon sums up his character by saying: "He promised only to betray, he flattered only to ruin; and however he might occasionally bind himself by oaths and treaties, his conscience, obsequious to his interest, always released him from the inconvenient obligation." He built largely and entertained the public lavishly: in Africa and Syria more monuments have been found to him than to any other Roman emperor. His provincialism was accentuated by his second marriage to one Julia Donna, of the "high Semitic aristocracy of Syria," who, Gibbon says, "united to a lively

imagination a firmness of mind and strength of judgement, seldom bestowed on her sex. . . . She was the patroness of every art and the friend of every man of genius." She must have been a woman of some character, for she continued to have considerable influence after her husband's death in the government of the Empire, during the mad and violent aberrations of their son Caracalla. Severus' work at Leptis almost certainly bears the imprint of his wife as well as himself, for there is much Eastern influence apparent both in planning and decoration.

Severus extended the town to the south-east between the main "spine" street of the old town and the wadi. Here he constructed a long and wide colonnaded street, its main axis bent in the centre to follow the course of the wadi and leading from the southern limit of the town directly down to the harbour. The harbour was also greatly extended to the east and south, probably at the same time, for the new street and new harbour seem linked in design. The practical reason—if any—for the new street is not clear; its ease of access to the harbour suggests it was a new approach to the harbour for the trade caravans from the interior, or it may have been built for religious processions (as was the case with a similar street at Palmyra) to the Temple of Jupiter built on the quayside. Whatever its purpose, it linked together the chief public buildings of the new town—the Baths, which Severus enlarged; the Gymnasium close by; and Severus' chief

monument, his new Forum and Basilica. The street was a fine piece of drama, for not only did it give some coherence to otherwise isolated buildings, but by the vista it gave down to the harbour it linked that to the centre of the new town; a man standing outside the Forum or even the Baths could see the ships at the quayside, and entering and leaving port. Such planning for vistas occurs also at Palmyra and Baalbek, and may be an instance of Julia Domna's Syrian influence. Two other portions of Severus' work remain: an exedra (called a Nymphaeum by the Italian excavators) masking the bend in the axis of the new street; and a triumphal arch sited on the main "spine" of the old town at its junction with the main west-east street.

The new Forum and Basilica was one unified design similar to Trajan's in Rome, in which the long side of the Basilica was built against the short side of the Forum, so that, Vitruvius says, "the merchants may assemble there in winter, without being inconvenienced by the cold. The main entrance to the Basilica is in the centre of this side, so that its cross axis is the continuation of the long axis of the Forum. At Leptis this axis is slightly bent at the entrance to allow the buildings to conform to the existing street pattern of the old town to the north, and the change of direction is masked with an apse. An inscription in the Basilica says both buildings were started by Septimius Severus and finished by Caracalla in 216 A.D.





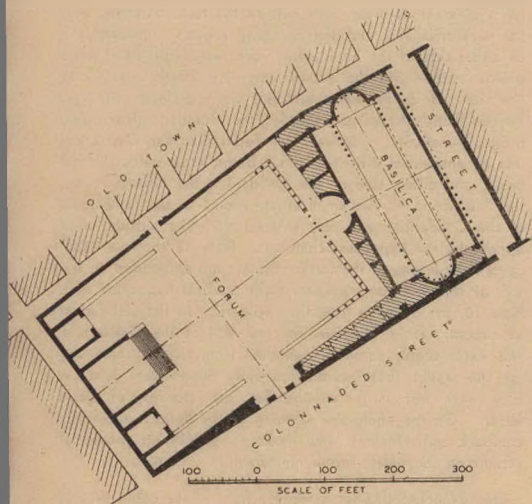


5. THE FORUM LOOKING TOWARDS THE BASILICA FROM THE TEMPLE.



6. A GENERAL VIEW OF THE BASILICA LOOKING NORTH.

### THE SEPTIMIUS SEVERUS FORUM AND BASILICA

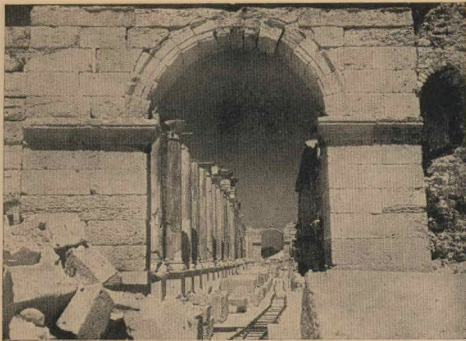


PLAN OF THE FORUM AND BASILICA,



7. DETAIL OF CARVED PILASTERS FLANKING THE APSE OF THE BASILICA.





B. STREET EAST OF THE BASILICA, JOINING OLD AND NEW TOWNS.

The FORUM (5) was 433 ft. by 285 ft. (Trajan's was approximately 400 ft. by 385 ft.) and was surrounded on both long sides and the short side against the Basilica by a covered arcade, behind which were stalls and shops. On the short side opposite the basilica there was a temple to the Imperial family raised on a high podium approached from the Forum by a flight of steps. The main entrances were in the centre of the long sides leading respectively to the old town on the north and the new street on the south. Minor entrances also gave access to both ends of the Basilica.

The BASILICA (6) is the show piece of the ruins at the moment owing to its size and extent; but its architectural interest is mainly historical, as most of its style is debased; some of it is Eastern in character, and shows a link with future Byzantine or even mediaeval work. The building, with apses, measured 302 ft. by 125 ft. (Trajan's, without apses, was 385 ft. by 128 ft.) and consists of a central nave with an aisle each side, and a semi-circular apse, on a platform of three steps, at either end of the nave. The span of the nave is approximately 60 ft., with the aisles half that span: they are separated by rows of monolithic granite columns approximately 35 ft. high, but these are not returned across the short ends in front of the apses. This absence of returns occurs in other African basilicas and may be a local peculiarity.

All the external walls are masonry, but both the apses are in brick and cement with small stones intermixed; the apses meet the masonry of the end walls with a completely straight joint at all four points. This would suggest the apses were later additions or at least alterations, though in that case what was here originally is difficult to conjecture, since the apse was always the traditional end of the Roman basilica, being the seat of the judges.

The apses were decorated with two large granite columns of the Corinthian order in the centre and smaller Ionic columns on either side, with another order (now lost) superim-

posed; niches were formed in the brickwork between the columns. On either side, against the returns of the apse, and acting as responds to the main rows of granite columns in the nave, were very heavily undercut sculptured pilasters (7). The character of this carving comes as a shock after the more or less standard classical detail of the rest of the building. It is certainly Eastern in origin, and very probably due directly to Julia Domna's patronage of the artists of her home. Eastern sex worship also appears: one of the sides of these pilasters gives in nine sculptured panels the monthly stages of the growth of the human embryo.

The roofing of the Basilica is uncertain. A normal entablature to the two main rows of columns, with a long inscription to Severus on the frieze, has been recovered. The nave must have had a normal low-pitched wooden tiled roof; holes exist in the side wall next to the Forum at the same height as the frieze to the entablature mentioned, so the aisles may have been roofed at this level, though the holes may equally well have supported a roof on the other side to the shops in the Forum. Whether the aisles were roofed or not, the external walls were taken well above these holes: perhaps there was a clerestory to the nave, above the entablature, to the same height.

On the far side of the Basilica, away from the Forum, a new street was built, linking the new colonnaded street with the old town. One side of this was decorated with a series of attached columns (8).

The BATHS were planned in the normal symmetrical manner, with the Frigidarium, Tepidarium and Calidarium all in sequence on the main axis. On either side of the Frigidarium (9) a pleasant open-air bath outside the main building, were the lavatories (13) and the changing rooms, "opodyteria"; on either side of the Tepidarium were two marble-lined warm plunge baths—with the brown water-line clearly marked on the side, as if the water had just been drained out; and beyond them, next to the lavatories, the anointing and scraping rooms, "unctoria." Between the Tepidarium and Calidarium was an ante-room with three small baths, presumably the hot baths, and either side of the Calidarium the hottest rooms, the "sudatoria." Two small square rooms, at the far corners of the Calidarium, and only entered from the outside, were apparently the hypocaust chambers. Plate 12 shows a hypocaust floor in one of the smaller rooms, and embedded on the wall at the rear some purpose-made vertical hypocaust tiles; Plate 10, the doorway from the Tepidarium to the Calidarium ante-room. Plate 11 shows the end wall of the Calidarium. The water supply came by aqueduct from cisterns some way up the wadi: these were apparently filled from wells, as they were not large enough for the storage of flood water. On the whole the planning of the Baths is extremely compact and efficient, and shows an interesting provincial variant on the better-known metropolitan examples.

The GYMNASIUM lies across the front of the Baths, though not axially related to them: it consisted of an open rectangular



9. GENERAL VIEW OVER FRIGIDARIUM, LOOKING WEST.

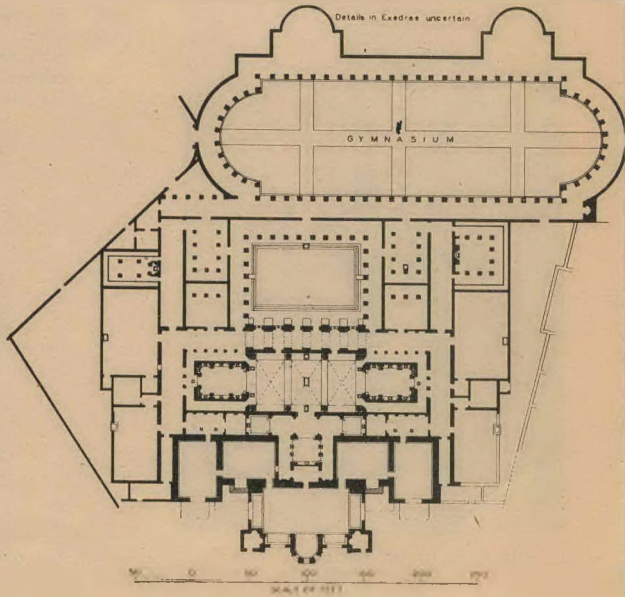


10. DOORWAY FROM TEPIDIARIUM TO ANTEROOM OF CALIDARIUM

## THE BATHS AND GYMNASIUM



11. VIEW OF THE SOUTH WALL OF CALIDARIUM.



Right: PLAN OF BATHS AND GYMNASIUM.





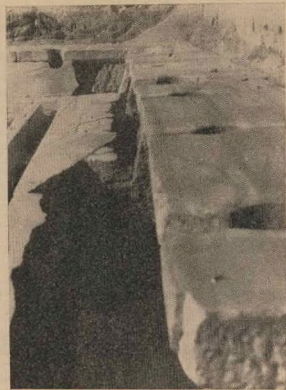
12. FLOOR SECTION IN ONE OF THE CHAMBERS ADJOINING THE CALIDARIUM, SHOWING THE TILE COLUMNS SUPPORTING A TILE AND CEMENT FLOOR, AND VERTICAL HYPOCAUST TILES EMBEDDED IN THE WALLS AT LEFT AND REAR.

"From (the floor) piers of 8 inch bricks are raised at such a distance from each other, that tiles of 2 feet may form their covering. The piers are to be 2 feet in height and are to be laid in clay mixed with hair on which the above-mentioned 2 feet tiles are placed."

*Vitravius, Ch. X, Bk. 5.*



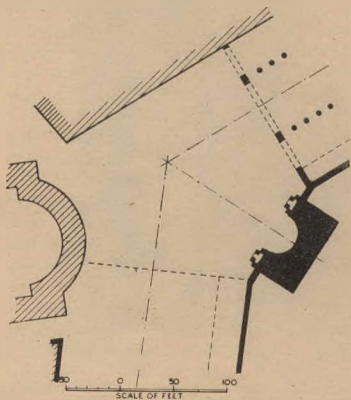
14. ONE FLANK OF THE EXEDRA.



13. DETAIL OF LAVATORY SEATS.

court, its length nearly three times its width, with both ends apsidal and two semi-circular exedras on the long side opposite the baths, and enclosed on all sides by an open colonnade.

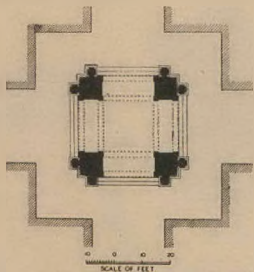
One end of the Gymnasium backed on to the open space that marked the change of axis of the new colonnaded street. On the opposite side of this space was the exedra already referred to: Plate 14 shows the treatment of one flank of this exedra and in the rear a portion of the semi-circular centre. A similar series of superimposed orders formed the other flank. One of the pediments from the upper tier of columns can be seen on the ground. The general debased character of both order and ornament is very apparent.



PLAN OF EXEDRA ON CHANGE OF AXIS OF COLONNADED STREET.



The ARCH OF SEPTIMIUS SEVERUS was probably built 203-204 A.D. (15 and 16). Its plan was square, similar on both axes; it was one of the "tetrapyla" that were common in North Africa, and represented another provincial departure from the normal Imperial model: the arch to Trajan, already referred to, is of the same plan, and there are others of the same pattern at Tebessa and Timgad (both in Africa) and Palmyra. A still later one at Rome, the Arch of Janus, probably of the fourth century, has the central space covered with a groined vault with brick ribs—a forerunner of Romanesque construction. Whether the Leptis arch was similarly roofed is uncertain, but these four-square arches may be another instance of the influence of the East, where the dome originated, and therefore may be another link with later Byzantine and Mediaeval technique. Many of the sculptured reliefs from the arch have been recovered: one shows a figure presumably from the spandrel of an arch (17) and another part of some triumphal or religious procession.



15. THE ARCH OF SEPTIMIUS SEVERUS, LOOKING WEST (THE WEST GATE IN 4th CENTURY WALL IS SEEN IN DISTANCE.)

The depth of excavation, clearly shown on extreme left, is slightly less than the average depth of desert sand over the whole site. It is an interesting fact that no ruts are visible in street paving.

## THE ARCH OF SEPTIMIUS SEVERUS



16. THE ARCH OF SEPTIMIUS SEVERUS, THE MAIN GATEWAY TO THE CITY FROM THE SOUTHERN DESERT. IN THE DISTANCE IS TRAJAN'S ARCH.



17. WINGED FIGURE FROM ARCH SPANDEL.

The HARBOUR, as enlarged, became an irregular pentagon in plan, with the new quays built on the promontory to the south of the harbour entrance (18). On these quays was built a temple to Neptune (19) for the benefit, it is said, of the Greek sailors who came to the port, and a tower, presumably with a pharos, on the extreme point next to the harbour entrance.

By far the most interesting detail is, however, that for mooring the ships. Stone mooring rings were built at close intervals into the quayside and to every third ring was planned a small stair, in two flights, leading to the water level. The design unit was therefore one stair with three mooring rings (20). Each unit projected 2 ft. or 3 ft. from its neighbour to cover the projection of the lower flight of steps; so that the quayside in plan had a serrated profile. There are at least 16 of these units, giving simultaneously berths for at least 48 ships, besides the rest of the quays. The total length of all was over 5,500 ft.

It seems probable that the diversion of the wadi to a wadi further west was done at the time the harbour was enlarged, for there is no provision for any river inlet on the landward side of the new harbour plan. To-day the wadi flows over the junction of the colonnaded street with the quayside, which is clearly impossible. The reason for the diversion may have been simply the building of the colonnaded street, but the builders of the time may also have hoped to prevent silting of the harbour, which they may have attributed to the seasonal floods. The dam wall built for this diversion still exists, and the bed of the diversion can be traced, including a bridge built where the diversion was crossed by the trade-route from the south.

\* \* \*

Other buildings have been discovered near the city—an amphitheatre and circus, and many villas, and further away forts and remains of olive factories, with their presses. In the private bath of one of the villas four very fine mosaics were found. These were probably of the second century and celebrated the blessings given to man by water—two panels dealing with the sea and two with fresh water. They are probably copies of earlier Hellenistic work, and reflect the Alexandrian spirit of the later Hellenistic world. They exalt the sea power of the Ptolemies and Ptolemaic commerce; the harbour shown in one panel is probably Alexandria harbour itself.\*

The Roman city itself appears to have reached its greatest extent in the fourth century. The line of the city walls at this time can be traced on the east and the west, but not on



18



19



20

\*Rostovtzeff, in "Social and Economic History of the Roman Empire," Vol. I, p. 352, gives a good illustration of this panel.

18. VIEW OF NEW QUAYS FROM THE NORTHERN PROMONTORY. THE NEARER STRUCTURE IS THE TOWER WITH THE TEMPLE OF NEPTUNE BEHIND. THE HARBOUR AND HARBOUR MOUTH IS NOW COMPLETELY SILTED UP.

19. MAIN QUAY WITH THE TEMPLE OF NEPTUNE ON LEFT.  
20. QUAYSIDE STEPS AND A BROKEN BUILT-IN STONE MOORING RING. [WATER LEVEL WAS APPROXIMATELY LEVEL OF SAND VISIBLE AT BOTTOM.]



the south, and gives an approximate overall dimension of one mile from west to east, and anything up to three-quarters of a mile from north to south. Septimius Severus gave the city the "lus Italicum," the highest privilege a Roman city could obtain, and in the third century the population was said to be 80,000. Decay began in the fourth century: the Berbers became more and more restless, and in 429 the Vandals, 80,000 strong, came over to Africa from Spain. Carthage fell in 439, and Leptis must have followed very soon after. Roman control vanished for a century, and sand and desertion together must have destroyed the greater part of the town.

The reasons for the ease of the Vandal conquest lay in the social and economic background of the later Roman period. The Roman cities, on which so much money was spent, were inhabited only by landowners and by the upper artisan class. The former were the only legal "citizens," and all land was owned by a very small and limited aristocracy—descendants of either Roman immigrants or those of the Punic aristocracy that had timed well their conversion to Rome. The process was always towards a greater concentration in the hands of fewer and fewer people. Pliny said in his time that six landowners owned half Africa.

The economic foundation of the country was still the Berber peasants, who were either tenants of the rich landowners, or much more frequently wage-earners on the serf-farms, the latifundia, which to Pliny were the dominant characteristic of Africa. The produce of the land changed; corn, not garden produce, became the staple product, so that Africa was said to produce one-third of the total corn imported by Rome. Olives, cattle, horses, wool, leather, dyes, slaves, as well as lead and zinc, were also exported. But it was an unstable as well as a superficial economy, for wealth was only taken out of the country and nothing was ever put back. The civilisation of the city hardly reached the peasants at all. They still worshipped their native gods, spoke their native tongue, and lived in "mapalia," their native huts; and their position only worsened with time. Hence the welcome they gave to Christianity, to the Vandals, and finally the Arabs. The Christian heresies of North Africa were largely a protest against Roman domination: the Vandals were only 80,000 strong when they came to Africa, so they relied on Berber levies for their campaigns; and of the Arab troops who conquered Africa and later Spain, by far the greater part were Berber converts. To the Berber peasant the conquerors came, as H. G. Wells said, "not as a conquest, but a social revolution . . . a liberation from an intolerable deadlock."

## 5. THE BYZANTINE CITY

### "THE MILITARY FORTRESS."

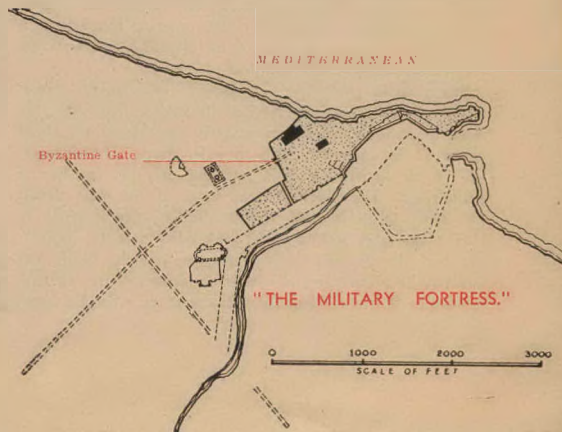
Belisarius conquered North Africa from the Vandals in 531 A.D., in Justinian's reign, and North Africa became Roman again, or more accurately, Byzantine for over a century till 642. Some of the Byzantine fortresses, including possibly



21. MAIN GATEWAY TO BYZANTINE CITY.  
LOOKING NORTH TOWARDS THE CITY.

Leptis, may have held out against the Arabs till Carthage finally fell in 698: but if it did it was as a garrison fortress and nothing else.

The real nature of this period is seen when the town plan is compared to that of the Roman periods. The Byzantine town has shrunk to the area of the original Roman, almost the original Phoenician, settlement. At least three-quarters of the later Roman town was deserted. Round this shrunk relic of a town was built the one monument of the period that has survived, and which typifies the age—the city wall. Well built, in good masonry, 30 to 40 feet high, it still dominates the pattern of the town. It included only the old Forum, the new Forum and Basilica of Severus and what lay between these buildings and the sea: probably only the northern end of the harbour was used, the main extension to the south being deserted. The Forum of Severus was converted into a





fort; where the old "spine" street of the town cut the wall a gateway was built (21), which still preserves intact its flat arch and its fine proportions.

The Byzantine period finally undermined African prosperity. To quote Gibbon again: "The wars, the conquests and the triumphs of Justinian are the feeble and pernicious efforts of old age which exhaust the remains of strength and accelerate the decay of the powers of life . . . the country was rapidly sinking into the state of barbarism from whence it had been raised by the Phoenician colonies and Roman laws." One estimate gave 5,000,000 as the number of Africans killed during Justinian's wars alone. No country could stand such internal losses when allied to internal conflict. The Arab conquest, in the middle of the seventh century, marked the end of town life, for they were not town-dwellers, though the towns were probably rather deserted than destroyed. Destruction of agriculture did not apparently occur till much later, when the Beni Hillal, a wild Arab tribe of Upper Egypt, were bribed, in 1050 A.D., to go west. They destroyed the date and the olive and the irrigation systems, the basic economy of the country. Henceforth Barbary piracy became the only staple occupation left, and this continued to be the main trade of the country and the curse of the Mediterranean till modern times.

## 6. SUMMARY.

### A.—TOWN-PLANNING.

The Roman town plan is chiefly interesting in that it was not the normal Roman rectangular camp plan, with the two main streets crossing at right angles in the Forum. It was a plan that grew out of trade, not military necessity: an historical document rather than a purposeful design. It is therefore in sharp contrast with a text-book plan like Timgad, built from the start as a brand new town for ex-Service men. The basis of the Roman occupation of Leptis was trade; and the core of Leptis developed along the trade-route from the south, and this remained the heart of the town till the end, as the position of the Byzantine town proves. Severus' new work was really an accretion, not an organic extension of this heart; a piece of Imperial showmanship verging on megalomania that had apparently very little practical foundation. It was in fact an apt reflection of the parasitic nature of the society for which it was designed.

Street design has little of interest. The "spine" street was lined with shops for most of its length; they were, like Arab shops to-day, simply recesses in the side of the street about 12 ft. wide and 4 ft. to 6 ft. deep. The sidewalks were 3 ft. or less in width, sufficient only for one line of pedestrians. The width between kerbs of the main streets was 20 ft. to 25 ft., that of the subsidiary streets 12 ft. to 15 ft. The main east to west street, which cuts the "spine" street at the Severan Arch, was approximately 25 ft., but this may have been the main coast road where it ran through the town. It was divided down its centre by a line of stones



22. NORTH GATEWAY IN THE BYZANTINE WALL ROUND THE NEW FORUM.

raised slightly above the street level (15). The colonnaded street of Severus was approximately 150 ft. wide, but that, of course, was exceptional. All the streets are paved in limestone, but there are no signs of wheeled traffic anywhere, possibly due to the prevalence of the camel. As mentioned, the Arch of Severus is raised three steps above the street level, and as the street junction is widened here, it seems there was a traffic roundabout at this crossing.

### B.—PLANNING AND CONSTRUCTION.

The main interest of the detailed planning of the buildings lies in their variations from the better-known examples of the text-books: these have already been discussed. No evidence was obtained of domestic work, though it is said the African house followed rather the Greek court than the Roman atrium plan. In construction some of the details are interesting. Most of the walling is in masonry of a fairly good standard, courses varying from 1 ft. 6 in. to 2 ft. 6 in. and stones up to 6 ft. long and 2 ft. deep. Most of the Severan Forum and Basilica, and the later Byzantine wall, is in masonry of this type. Horizontal bands of brick and cement were sometimes used as banding courses in walls of inferior masonry—such as some of the internal walls to the Forum (Plate 5, background) and some of the side walls to the colonnaded street nearer the harbour. On the whole, however, the city is predominantly stone and not brick.

The stone arch was used for most openings, and the auditorium to the theatre is built up on the normal complicated arenated system. Brick arches only occur in brick walling, and then only on a small scale; there is no evidence here of the great brick vaults of the later Roman period. The baths, for instance, are all in stone, though there is nothing left to

suggest their roofing. The flat arch was used in the Byzantine period, possibly before. The main gateway to the Byzantine city shows a fine example with joggle jointing (21). The north entrance (in the Byzantine wall) to the Severan Forum (22) shows a flat relieving arch with straight joints. This entrance is almost Greek in spirit, a faint echo of the door to the Erectheion. It has a similar batter to the jambs, the width of the opening being considerably less at the top than at the bottom. The mitred joint between the head and jamb of the architrave is one rather surprising detail.

#### C.—MATERIALS.

The chief materials used were: limestone for most of the masonry (said to be from African quarries); grey granite, said to be from Egypt, for the monolithic columns; white marble from Greece and the islands for the Corinthian capitals, and occasionally other marbles, such as Cippolino from Algiers. Of these, by far the commonest were the limestone and granite. The vast majority of the columns that have survived are of this granite and monolithic, possibly descendants of the Egyptian obelisk technique, though the turning of the shafts must have been a new problem. Practically all the materials used throughout the history of the city, including the timber and cement, must have been brought by sea.

#### D.—DECORATION.

Decoration followed the normal practice. Internally the public buildings were sheathed in marble: the holes for the bronze cramps are visible throughout the Basilica (6 and 7). Stetuary and carved reliefs have been recovered from the baths (frontispiece) and the Severan Arch; much of the decorative detail is poor in taste (23—from the Severan Forum). Some of the mosaics, now in the Museum, such as that referred to, show, however, a refreshing and original vitality.

#### E.—THE EXCAVATIONS.

Two exceptional factors preserved Leptis Magna: the sands and the Arabs. The sands gradually covered and protected the town; and the Arabs, not being town-dwellers, did not use it as a quarry. Later generations hardly knew of its existence. Some columns are supposed to have been used for a local mosque, and the French Consul at Tripoli in 1687 is said to have sent 600 columns to Louis XIV for Versailles. The present excavations were started by the Italians in 1920 and were continued till the start of the present war. The work was mainly for Fascist propoganda, combined with the tourist trade. No stratigraphic analysis was made as the work progressed, so much valuable evidence has been permanently lost: and there has been no scientific publication worth the name.

\* \* \*

The present article only attempts to give a general picture, and some context for the photographs. Allowance must be made for its shortcomings, as the material was collected while on Active Service, and there has been no time available for any independent research or analysis.



23. DETAIL OF CARVED RELIEF FROM SEVERAN FORUM.

#### AUTHORITIES CONSULTED:

- 
- Cambridge Ancient History.  
 Encyclopaedia Italiana: Articles on "Leptis Magna" (P. Rossunelli) and "Sabrathra."  
 Rostovtzeff: Social and Economic History of Hellenic World.  
 Social and Economic History of Roman World.  
 Ward-Perkins, Major: Official Report on Leptis Magna to Civil Affairs Branch, G.H.Q. M.E.F. and files of this Branch in general.  
 Brodrick, A. H.: North Africa, Oxford, 1942.  
 Seligman, C.: Races of Africa, London, 1939.

#### PHOTOGRAPHS:

The photographs were all taken by W. D. Parteous, of Johannesburg, now serving with the S.A.A.F. They are an achievement of merit, as they were taken, developed and printed in spare time while on Active Service, under desert conditions.

Captain E. W. N. Mallows, who is again on Active Service in Italy, wrote this article while on a short spell of leave in the Union.

EDITOR.



# SCHOOL OF ARCHITECTURE AND QUANTITY SURVEYING UNIVERSITY OF PRETORIA

FIRST ANNUAL EXHIBITION OF STUDENTS' WORK, 5th SEPTEMBER, 1944

---

At the opening ceremony, Prof. Meiring mentioned some interesting facts about the development of architectural education in Pretoria. He said that there were three stages : 1. The period between 1920 and 1928, when, with the demand for technical education after the last World War, the Pretoria Technical College started and maintained a course in Architecture and Quantity Surveying. Members of the staff were Messrs. V. S. Rees-Poole, Ellis, J. Lockwood-Hall, Pease, Deuchar and Prentice, and students Messrs. Bernard, G. Lockwood-Hall, Preller, Nunn, Cole-Bowen, Ward, Woodrow, Lane, and Drummond. Examinations were undertaken by the University of the Witwatersrand. The second period was between the years 1929 and 1942, when, under the "Gentleman's Agreement" between the Universities of the Witwatersrand and Pretoria, the former University undertook the teaching and examining of local students in Architecture at Pretoria, whilst the latter University undertook the teaching and examining of the Rand students in Quantity Surveying at Johannesburg. Professors Bell-John and Pearse, with Messrs. Fassler, Howie, MacIntosh, Fraser Lawrie, van Riet Louw, Whale, Todd, Eaton, Eddy and the late Dr. Martienssen were the staff members. The agreement worked so well that it was once renewed, and, when in 1942 Pretoria decided to inaugurate its own independent Department of Architecture and Quantity Surveying, the feelings between the two Universities was of a most friendly nature. Prof. Meiring expressed his deep appreciation of the fact that the good feelings have been maintained, if not strengthened, by the retention of the

close contact between the two Universities in matters architectural, and the wholehearted support he has experienced from the Witwatersrand staff members ever since his arrival in Pretoria.

The third period is the present one, and the students' work displayed is that of this period, although credit for any good work done since the beginning of 1943 must be shared with the men who were responsible for the training of the students in the preceding years. The students who made the best progress in this period are :—

#### Architecture :

First Year : D. M. Tunmer.

Third Year : B. W. Viljoen.

Fourth Year : W. S. Smit.

Fifth Year : J. v.d. Werke.

#### Quantity Surveying :

First Year : W. H. Malan.

Second Year : P. G. van

Rooyen.

Third Year : A. J. Clemons.

Final Year : A. R. Hunt.

Prof. Meiring thanked the "Old Boys" who contributed to the section of the exhibition in which some work of the past was displayed, and, in introducing Mr. Haddon to the audience, mentioned with appreciation the keen interest the President-in-Chief took in architectural education. It was an inspiration to him and the staff, the Professor said, to know that Mr. Haddon had strong views, especially on the standard in design, for it made them strive after that standard. The Institute, it was felt, was not only aware of what was happening in the Schools of Architecture, but also gave them every support.

---

## ADDRESS OF THE PRESIDENT-IN-CHIEF, Mr. D. S. HADDON

Mr. Dean, Professor Meiring, Ladies and Gentlemen :

I thank Professor Meiring for the kind remarks he has made about me, and I can assure him that his fears that I will criticise the designs exhibited at this exhibition are unfounded, as the theme of my remarks will be the practice of Architecture.

The Institute of which I have the honour to be President-in-Chief, despite its more publicised activities of badgering Cabinet Ministers and Building Control, primarily exists to control and foster architectural education in this country. I am honoured, therefore, by being asked to open this exhibition of the work of students of the third and youngest University School of Architecture established in this country, and I take this opportunity of publicly congratulating Prof. Meiring on being

this year's Chairman of the Institute's Board of Education. I can safely say that I am sure he will make a better and wiser Chairman than his immediate predecessor, in the person of myself.

\* \* \*

The training of architects has evolved out of the old articles system of training in the offices of practitioners, where it could be said that only the fortunate few who served in the offices of the well-established and proved architects received adequate tuition and practical experience.

The school system necessarily arose out of the demands of science on the building industry. Offices proved too circumscribed in the work in many cases, specialising in one or two

types of building, and the need for training in the scientific aspect of building forced the establishment of schools with permanent teaching staffs. From this arises the danger that confronts the student to-day: that training may become academic at the expense of practice. The teaching staff of the three Schools in this country and the Institute realise this and every step to ensure adequate practical experience and training is at hand for the student.

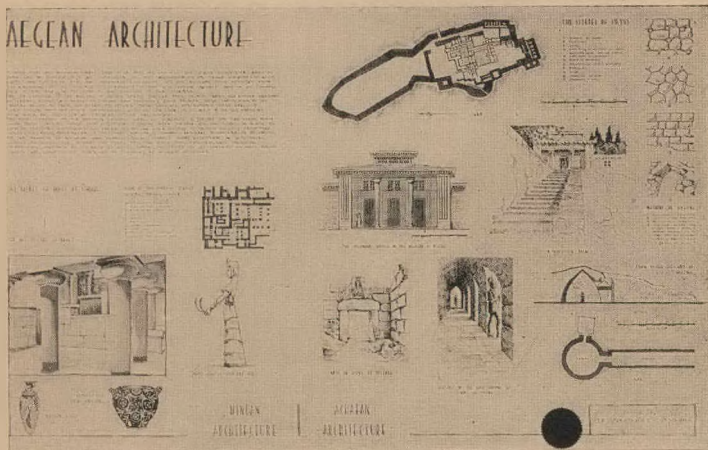
For the five years of his academic life, however, the student is living in the cloistered atmosphere of a University. The practice of his profession lies in the future, and I beg of those students here to-day never to lose sight of the fact that the fulfilment of their training lies in that future practice. They must ultimately compete with their fellows and serve the building public to the best of their ability in that hard school, the building industry.

In practice, Architecture is a combination of art and science, being concerned with the realities of brick, steel and concrete, with different methods of construction, and with organisation, finance and business it serves, and is the expression of certain

of the functional needs of the community. The restraining influence of practice is absent from the School. Think always of a project as a reality and of the difficulties in carrying it to completion as a building. Take every opportunity of studying the practical aspects of your profession.

No school—and students make a school—which does not face the realities of the age in which it exists can merit success. It must do more: it must anticipate the future and prepare for it. To-day the world and South Africa offer great and wonderful opportunities to architects. Let it not be said, as I have often heard it said, that one great architect in a generation is all that any country can expect. To better this, and in conclusion, may I say that every student should remember that he must, in the end, practice his profession with success in the eyes of his fellow men.

It is now my pleasant duty to declare this exhibition open, recommending you to study the work of the students and compare it with the work of practitioners, exhibited also in this room, which must serve to stimulate the student with a desire some day to reach their standard.

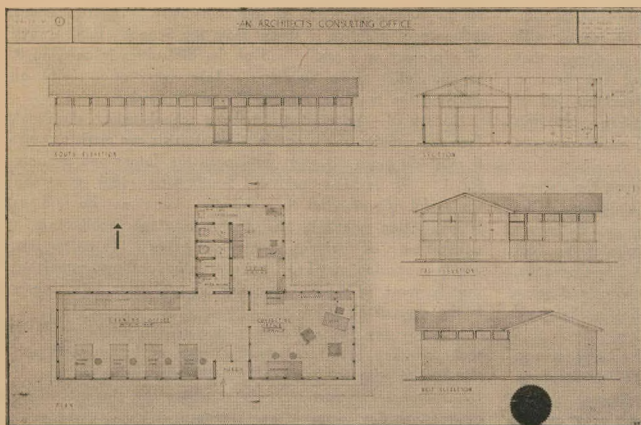


STUDIES FOR THE HISTORY OF ARCHITECTURE.

By B. W. Viljoen, Second Year.

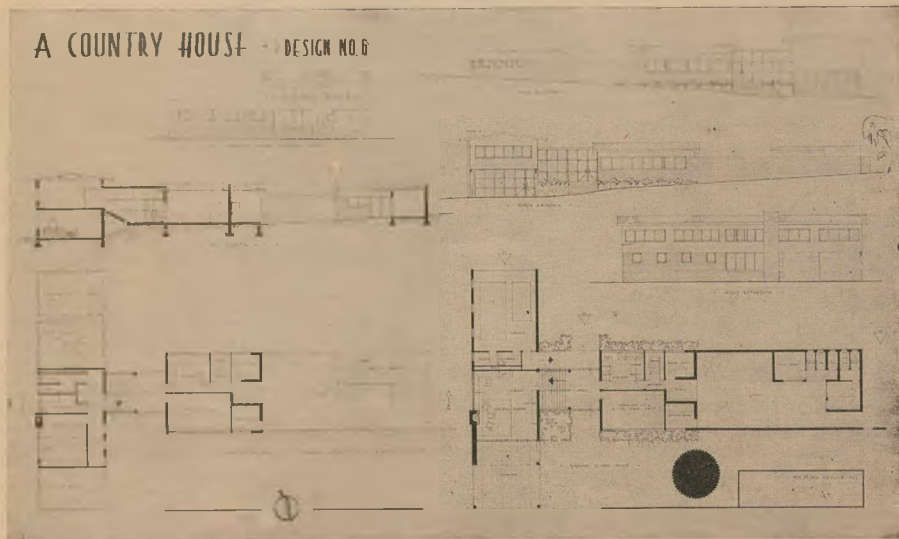
A SELECTION FROM THE WORK EXHIBITED IS ILLUSTRATED ON THIS AND THE FOLLOWING PAGES



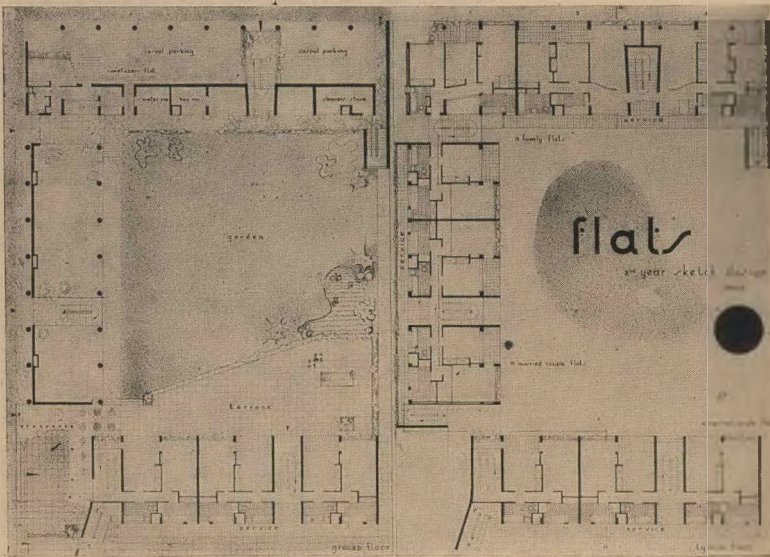
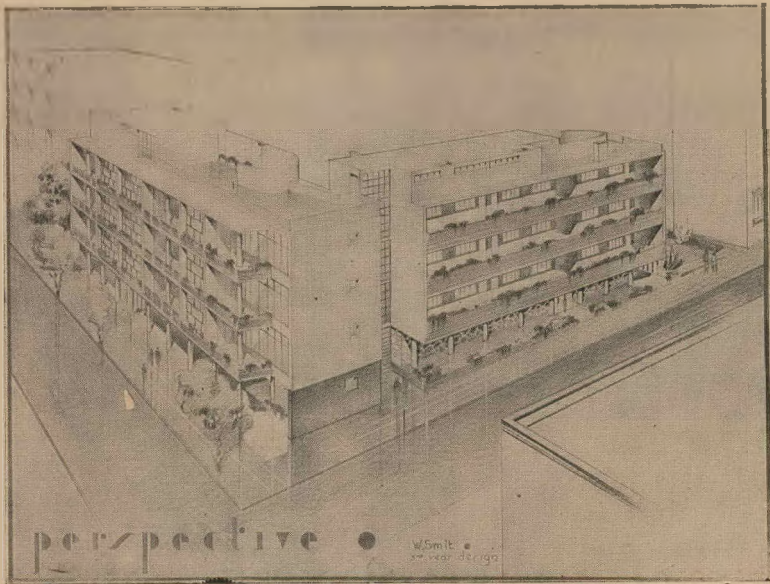


AN ARCHITECT'S CONSULTING OFFICE.

A Design Study by D. W. Tunmer, First Year.



A SKETCH DESIGN STUDY by B. W. Viljoen, Second Year.



A SKETCH DESIGN STUDY.

By Wynand Smith, Third Year.



A SKETCH DESIGN. By Wynand Smit, Third Year.

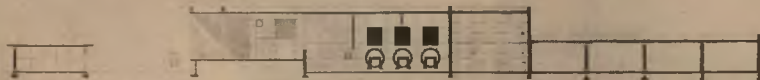
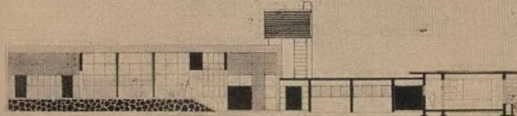


A TOWN PLANNING SCHEME FOR THE CENTRE OF PRETORIA. By John van der Werke and Wynand Smith, Fourth Year.

A BUTTER FACTORY CO

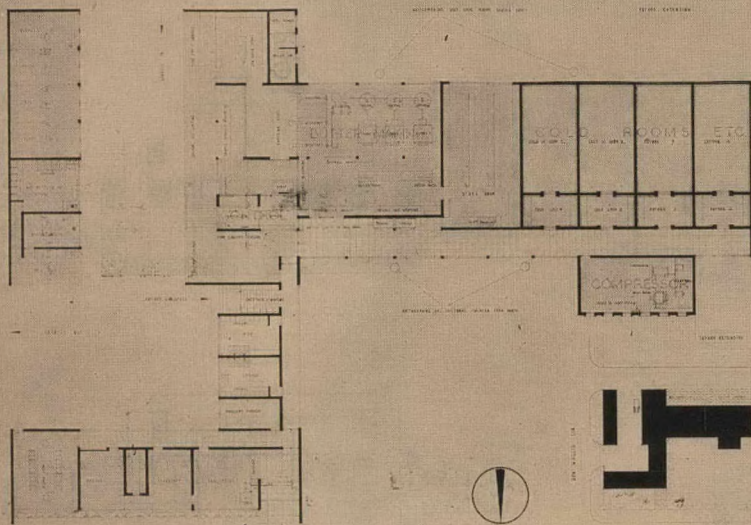


ADN. 10000000. 1000000000



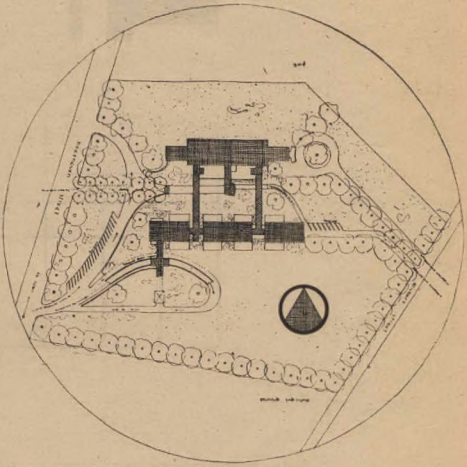
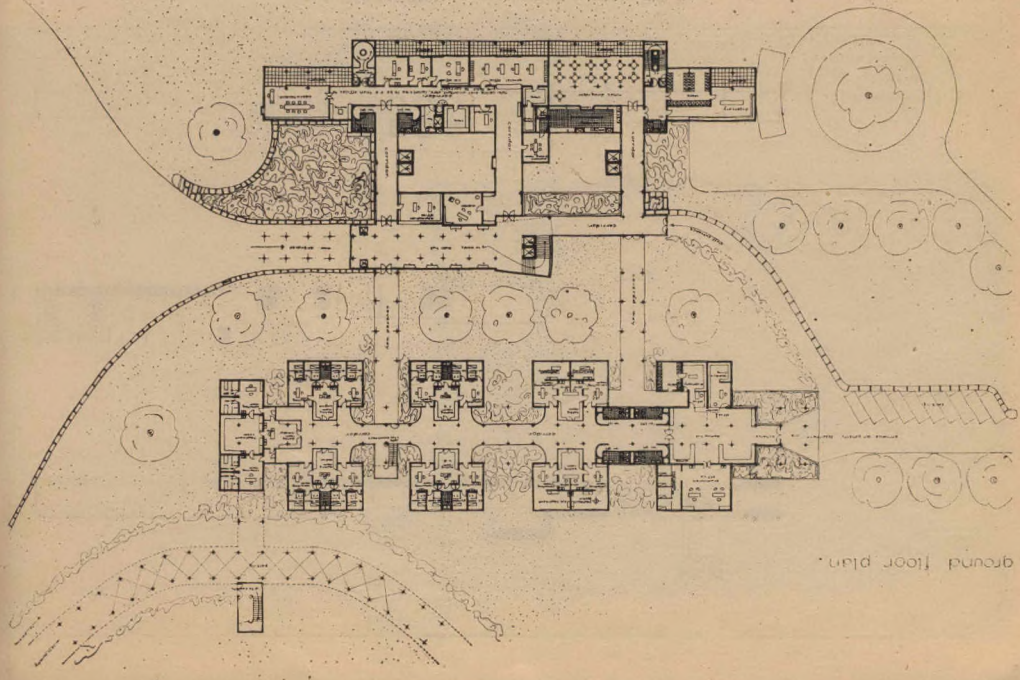
A BUTTER FACTORY designed by H. P. F. Meyer, Fifth Year.

A BUTTER FACTORY CO

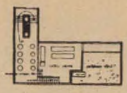




ground floor plan.

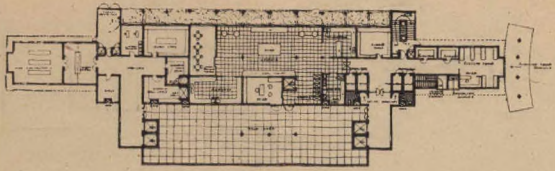


block plan.

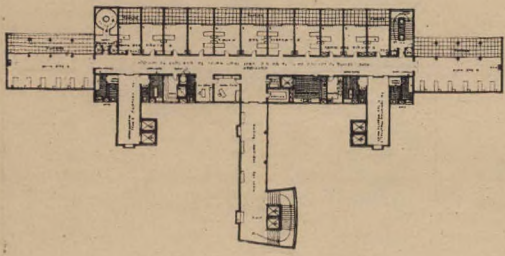


Basement

Basement.

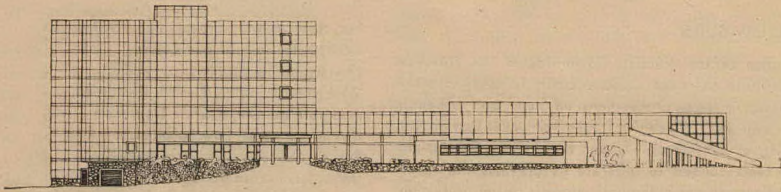


2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup> floor.





north elevation .



west elevation .



south elevation .

A SKETCH DESIGN FOR A GENERAL HOSPITAL by John van der Werke, Fifth Year

---



# THE TRANSVAAL PROVINCIAL INSTITUTE

## A COMMENTARY ON THE WORK OF THE PROVINCIAL COMMITTEE

By D. M. Cowin and J. Fassler

### FEES AND LAWSUITS :

The attention of the Practice Committee of the Transvaal Provincial Institute has been drawn recently to cases of architects engaging in legal proceedings on their own behalf in connection with the payment of fees for work carried out under varying circumstances. Under these circumstances the Committee feels obliged to reiterate its previous statements that such actions are not in the best interests of the profession, and urges all practising architects to approach the Institute in all cases of disputes regarding fees before instituting legal proceedings.

### SPECIFICATIONS :

Some caustic comments were recently made by the Provincial Authorities on the standard of specifications submitted by architects, and have suggested that the Institute should propose a model specification to be published in the "Record" in serial form for the benefit of the profession. It happens that in the past the onerous and uninteresting task of writing the specification has been left to the quantity surveyor, but it is felt that the architectural profession can improve on the accepted standard of description in the manner indicated below, where the supply and installation of a well-known convenience is described.

Provide and fix in place ordained  
And manner as prescribed  
A comely piece of vitreous ware  
More usually described  
As "Pedestal for W.C.,"  
Affording the potentials  
Of pan and trap, and seat and flap  
As primary essentials.  
And these, combined in graceful form,  
By cunning craftsmen wrought,  
Set fair and square upon the floor,  
With back to wall and face to door,  
Held fast by screws with rose-shaped head  
Full driven hard to plugs of lead,  
Enscenced to holes in concrete cast,  
With faintail sides to hold them fast.  
This done, proceed at once to get  
A valveless cistern flushing set,  
And fix securely to the wall  
At height to give the proper fall

For steel drawn flushing pipe to flow  
With water full, to pan below,  
The cistern to supply pipe wed  
With service pipe of short bent lead,  
And furnish with a brass stop-cock  
Unwanted water flow to block.  
But all above would be in vain  
Unless connected to a drain,  
The means for which may be espied  
In items "later specified."

### PROVINCIAL WORK :

The Institute's Liaison Committee has reported that the Transvaal Provincial Administration's Executive Committee has approved of the appointment of 73 firms of architects to carry out a considerable programme of work for the period ending March, 1945. In this allocation, which it is not possible to publish at present, members on active service figure prominently. Since the Provincial Authorities are anxious to give preference to architects in the Services, it is important that all members on active service should notify the Institute as regards the architects who are acting for them, and the Institute in turn will send the information to the correct quarter.

Considerable thought is being given by the Provincial Committee at present to the equitable apportioning of fees, where members are on active service and have been nominated as collaborators in various groups. A suggestion from the Province that fees accruing to them should be held in a trust fund until their return from service, so that they will have some capital to re-establish themselves in practice, is also being investigated.

The group system for carrying out work suggested by the Institute, particularly where such work is large in size, has been adopted. In the present allocation the Administration itself has grouped architectural firms. A further suggestion from the Institute that in future groups should be voluntary has been accepted by the Administration.

The thorny question of consultants for Provincial work has not yet been finalised, but will be dealt with in the near future.

### B.E.S.L. HOUSING SCHEME :

Of all the undertakings which the Institute has embarked upon at various times, few can match the British Empire Service

League Housing Scheme at Sandringham, Johannesburg, for the intractable nature of the difficulties that have beset both Small House Bureau Committee and promoters in launching the project. The history of this endeavour on the part of the Institute to assist in providing houses for returned soldiers must be well known to members from the number of circulars that have been sent out during the past six months.

Recently the requirements of the B.E.S.L. were finalised, and architects were invited to submit designs for houses in accordance with certain conditions as regards the nature of finish and floor area. An excellent response followed and a number of well designed houses were submitted. Most solutions provided the maximum area laid down, which was 1,850 super feet. The Small House Bureau Committee then became anxious regarding the cost of these houses in view of the present inflated price of building, and as it did not feel that they could be built at a figure which the returned soldier could afford, and further, as the Committee had repeatedly warned the B.E.S.L. on this point, the Committee decided to call a meeting of members who had submitted schemes in order to discuss the position before requesting that further work in the way of working drawings be undertaken.

This meeting duly took place, and it was generally agreed by the members present that it would be advisable, both in the interests of the profession and the B.E.S.L., to prepare additional plans for smaller houses of 1,250—1,450 super feet and 1,450—1,650 super feet, so that a wide range at varying prices would be available for selection. The manner in which the members of the profession who were present, and who had already expended considerable time and labour on the scheme, agreed to work out further projects, was very commendable, and will ensure that any failure to provide houses for the ex-Serviceman under the B.E.S.L. scheme will not be the fault of the profession.

The position at present is that the B.E.S.L. will select and build 50 houses from those submitted by architects as soon

as the latest sketch plans are available. Further, the Controller of Building has agreed to issue permits for groups of 50 houses at a time. It will be interesting at a later stage to record what reductions in cost have been effected by building the houses on the above basis.

#### HOUSING COMPETITION, NELSPRUIT :

The Institute has been approached by the Municipality of Nelspruit to ascertain under what conditions they could conduct a competition for a sub-economic housing scheme. They have found that the conditions laid down are unacceptable, and have decided to conduct the competition on their own, with their Council as assessors. They have been informed that under those circumstances no architect may submit designs, and the practising membership in the Transvaal is advised accordingly.

#### TOWN PLANNING :

Messrs. J. Fassler and D. M. Cowin have been nominated as the Institute's representatives on the Council of the Transvaal Town Planning Association. The name of this body has been amended to the Town and Country Planning Association of the Transvaal, and all members who have not yet joined the Association are advised to do so without delay. It is surprising that both the Southern Africa Branch of the Town Planning Institute and the Association of Municipal and Country Engineers have both refused representation on the Council, in view of their relations with the parallel body in Britain.

#### BUILDING CONTROL :

Members are reminded that any problems relating to Building Control can be discussed with the Institute's representatives on the Local Advisory Committee, Messrs. A. Fair and M. Ringrose.



## *Craftsmanship in War-Time*

**I** is at once a reflection of this country's fortunate situation and a tribute to the resources of its industry that, after five years of war, it is yet able to enjoy many of the services for which it normally depended upon imported materials and the conditions of peace.

**D**ESPITE the preoccupation of the greater part of our organisation with essential services, the skilled craftsmanship and distinctive design associated with our name are still available for civilian work, albeit local and substitute materials must be employed together with the limited imported stocks remaining at our disposal.

**T**HERE is no class of work for which the architectural and building world has been accustomed to look to us, which, consistent with the controllers' releases, we are not able and prepared to undertake to-day.

**FREDK. SAGE & CO. (S.A.) LTD.**

Shopfitters & Metal Craftsmen,

10, Heidelberg Road,

Village Main,

JOHANNESBURG.

P.O. Box 777.

Tel. 22-7555.

*Journal of the SA Architectural Institute*

**PUBLISHER:**

University of the Witwatersrand, Johannesburg

**LEGAL NOTICE:**

**Disclaimer and Terms of Use:** Provided that you maintain all copyright and other notices contained therein, you may download material (one machine readable copy and one print copy per page) for your personal and/or educational non-commercial use only.

The University of the Witwatersrand, Johannesburg, is not responsible for any errors or omissions and excludes any and all liability for any errors in or omissions from the information on the Library website.